

REPLACEMENT CLAIMS

1. A method for transmitting a data block over a network from a first sending node to a first set of recipient nodes, comprising:

in the first sending node:

dividing the first set of recipient nodes into a subset of selected nodes, selected according to scoring criteria associated with each recipient node, and a subset of unselected nodes;

assigning at least one of the unselected nodes to at least one selected node according to scoring criteria associated with the respective selected nodes; and

transmitting to each selected node a packet including the data block and a first list of the nodes assigned to the selected node, the list dynamically associating the selected assigned node with the reassigned nodes for the transmission of the data block to the reassigned nodes.

3. The method of claim 1, further comprising: in at least one recipient node:

receiving from the first sending node the packet including the data block and the first list of assigned nodes;

dividing the first list of assigned nodes into a subset of selected assigned nodes, selected according to scoring criteria associated with each assigned node, and a subset of unselected assigned nodes;

reassigning each of the unselected assigned nodes to at least one selected assigned node according to the scoring criteria associated with the respective selected assigned nodes; and

transmitting to each selected assigned node a packet including the data block and a list of the nodes reassigned to the selected assigned node, the list dynamically associating the selected assigned node with the reassigned nodes for the transmission of the data block to the reassigned nodes.

12. The method of claim 1, further comprising:

in a second sending node, which is also in the first set of recipient nodes:

dividing a second set of recipient nodes into a subset of selected nodes, selected according to scoring criteria associated with each recipient node, and a subset of unselected nodes;

assigning each of the unselected nodes from the second set of recipient nodes to at least one selected node from the second set of recipient nodes according to scoring criteria associated with the respective selected nodes; and

transmitting to each selected node from the second set of recipient nodes a packet including the data block and a second list of the nodes assigned to the selected node, the list dynamically associating the selected node with the unselected nodes for the transmission of the data block to the unselected nodes.

13. The method of claim 12, further comprising: in a second selected node:

receiving from the second sending node the packet including the data block and the second list of assigned nodes;

dividing the second list of assigned nodes into a subset of selected assigned nodes, selected according to scoring criteria associated with each assigned node, and a subset of unselected assigned nodes;

reassigning each of the unselected assigned nodes from the second list of assigned nodes to at least one selected assigned node from the second list of assigned nodes according to the scoring criteria associated with the respective selected assigned nodes; and

transmitting to each selected assigned node from the second list of assigned nodes a packet including the data block and a list of the nodes reassigned to that node, the list dynamically associating the selected assigned node with the reassigned nodes for the transmission of the data block to the reassigned nodes.

14. A method for transmitting a data block over a network from a first sending node to a first set of recipient nodes, comprising:

in at least one selected node in the first set of recipient nodes:

receiving from the sending node the packet including the data block and a list of assigned nodes;

dividing the list of assigned nodes into a subset of selected assigned nodes, selected according to scoring criteria associated with each assigned node, and a subset of unselected assigned nodes;

reassigning at least one of the unselected assigned nodes to at least one selected assigned node according to the scoring criteria associated with the respective selected assigned nodes; and

transmitting to each selected assigned node a packet including the data block and a list of the nodes reassigned to the selected assigned node, the list dynamically associating the selected assigned node with the reassigned nodes for the transmission of the data block to the reassigned nodes.

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24. A computer program product residing on a computer readable medium comprising instructions for causing a particular network node, connected to a network having a plurality of network nodes, to:

create a first set of recipient nodes from among the plurality of network nodes;

divide the first set of recipient nodes into a subset of selected nodes, selected according to scoring criteria associated with each recipient node, and a subset of unselected nodes;

assign at least one of the unselected nodes to at least one selected node according to scoring criteria associated with the respective selected nodes; and

transmit to each selected node a packet including a data block and a list of the nodes assigned to the selected node, the list dynamically associating the selected node with the unselected nodes for the transmission of the data block to the unselected nodes.

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26. The product of claim 24, further comprising instructions for causing the particular network node to

receive from one of the network nodes a packet including a data block and a list of assigned nodes;

divide the received list of assigned nodes into a subset of selected assigned nodes, selected according to scoring criteria associated with each assigned node, and a subset of unselected assigned nodes;

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reassign each of the unselected assigned nodes to at least one selected assigned node according to the scoring criteria associated with the respective selected assigned nodes; and

transmit to each selected assigned node a packet including the received data block and a list of the nodes reassigned to the selected assigned node, the list dynamically associating the selected assigned node with the reassigned nodes for the transmission of the data block to the reassigned nodes.

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34. A computer program product residing on a computer readable medium comprising instructions for causing a particular network node, connected to a network having a plurality of network nodes, to:

receive from one of the network nodes a packet including a data block and a list of assigned nodes;

divide the list of assigned nodes into a subset of selected assigned nodes, selected according to scoring criteria associated with each assigned node, and a subset of unselected assigned nodes;

re-assign at least one of the unselected assigned nodes to at least one selected assigned node according to the scoring criteria associated with respective selected assigned nodes; and

transmit to each selected assigned node a packet including the received data block and a list of the nodes reassigned to the selected assigned node, the list dynamically associating the selected assigned node with the reassigned nodes for the transmission of the data block to the reassigned nodes.

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43. A system for transmitting data comprising:

a data network;

a plurality of network nodes, including at least one sending node; wherein each sending node is programmed to:

create a first set of recipient nodes from among the plurality of network nodes;

divide the first set of recipient nodes into a subset of selected nodes, selected according to scoring criteria associated with each recipient node, and a subset of unselected nodes;

assign at least one of the unselected nodes to at least one selected node according to scoring criteria associated with the respective selected nodes; and

transmit to each selected node a packet including a data block and a list of the nodes assigned to the selected node, the list dynamically associating the selected node with the unselected nodes for the transmission of the data block to the unselected nodes.

45. The system of claim 43, wherein at least one of the plurality of network nodes is programmed to:

receive from one of the network nodes a packet including a data block and a list of assigned nodes;

divide the list of assigned nodes into a subset of selected assigned nodes, selected according to scoring criteria associated with each assigned node, and a subset of unselected assigned nodes;

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reassign each of the unselected assigned nodes to at least one selected assigned node according to the scoring criteria associated with respective selected assigned nodes; and

transmit to each selected assigned node a packet including the received data block and a list of the nodes reassigned to the selected assigned node, the list dynamically associating the selected assigned node with the reassigned nodes for the transmission of the data block to the reassigned nodes.

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56. A system for transmitting data comprising:

a data network;

a plurality of network nodes;

wherein at least one particular node of the plurality of network nodes is programmed to:

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receive from one of the network nodes a packet including a data block and a list of assigned nodes;

divide the list of assigned nodes into a subset of selected assigned nodes, selected according to scoring criteria associated with each assigned node, and a subset of unselected assigned nodes;

reassign at least one of the unselected assigned nodes to at least one selected assigned node according to the scoring criteria associated with respective selected assigned nodes; and

transmit to each selected assigned node a packet including the received data block and a list of the nodes reassigned to the selected assigned node, the list

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dynamically associating the selected assigned node with the reassigned nodes for the transmission of the data block to the reassigned nodes.

NEW CLAIMS

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68 A method for transmitting a data block from a sending node to a plurality of recipient nodes, comprising:

the sending node selecting at least one node from the plurality of recipient nodes, said selecting is based on a score associated with the selected node by a scoring criteria to provide at least one sc/node 2 at least one unselected nodes;

all
the sending node assigning at least one unselected node from the plurality of nodes to the selected node;

the sending node generating a list of assigned unselected nodes for said at least one selected node; and

the sending node transmitting to said at least one selected node the data block and the corresponding list of assigned unselected nodes, said at least one selected node is configured to respond to said transmitting by said at least one selected node transmitting the data block to the assigned unselected nodes from the corresponding list.